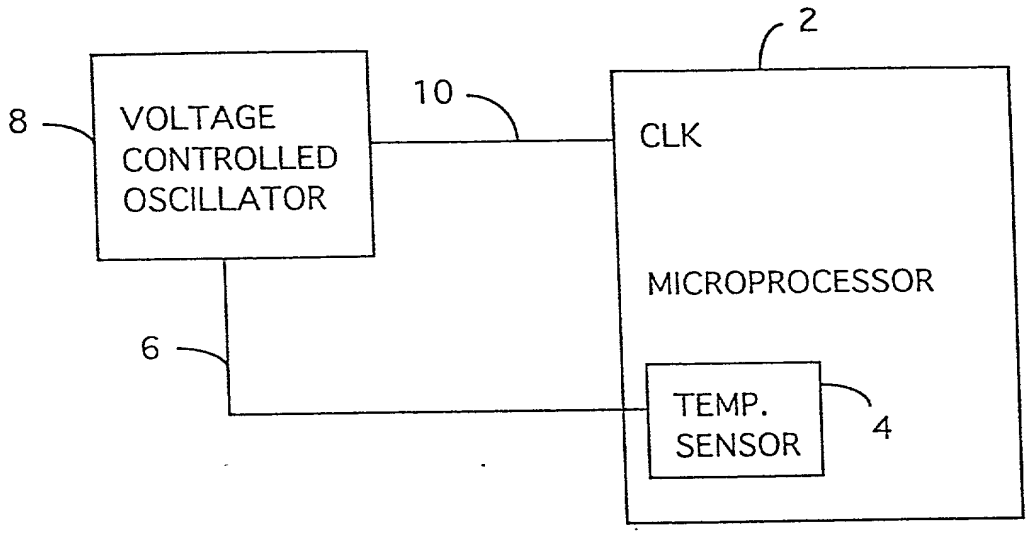
2
8
VOLTAGE CONTROLLED OSCILLATOR
10
CLK
MICROPROCESSOR
6
TEMP. SENSOR
4

FIG. 1

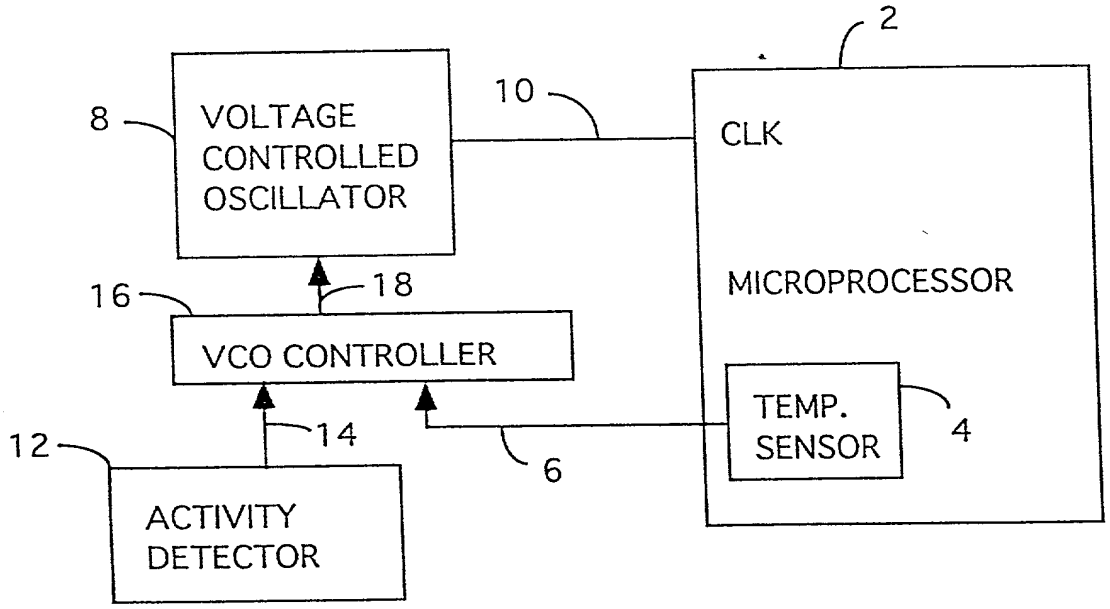
2
8
VOLTAGE CONTROLLED OSCILLATOR
10
CLK
MICROPROCESSOR
16
18
VCO CONTROLLER
TEMP. SENSOR
4
12
14
6
ACTIVITY DETECTOR

FIG. 3

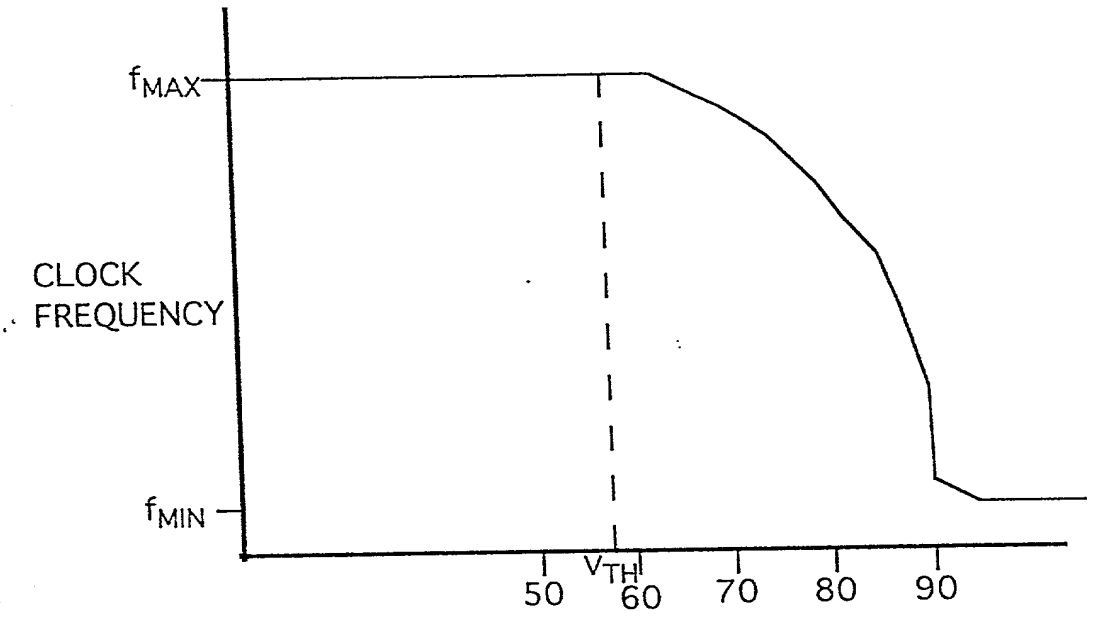
f_{MAX}
CLOCK
FREQUENCY
f_{MIN}
V_{TH}
50
60
70
80
90
CHIP TEMPERATURE (°C)

FIG. 2

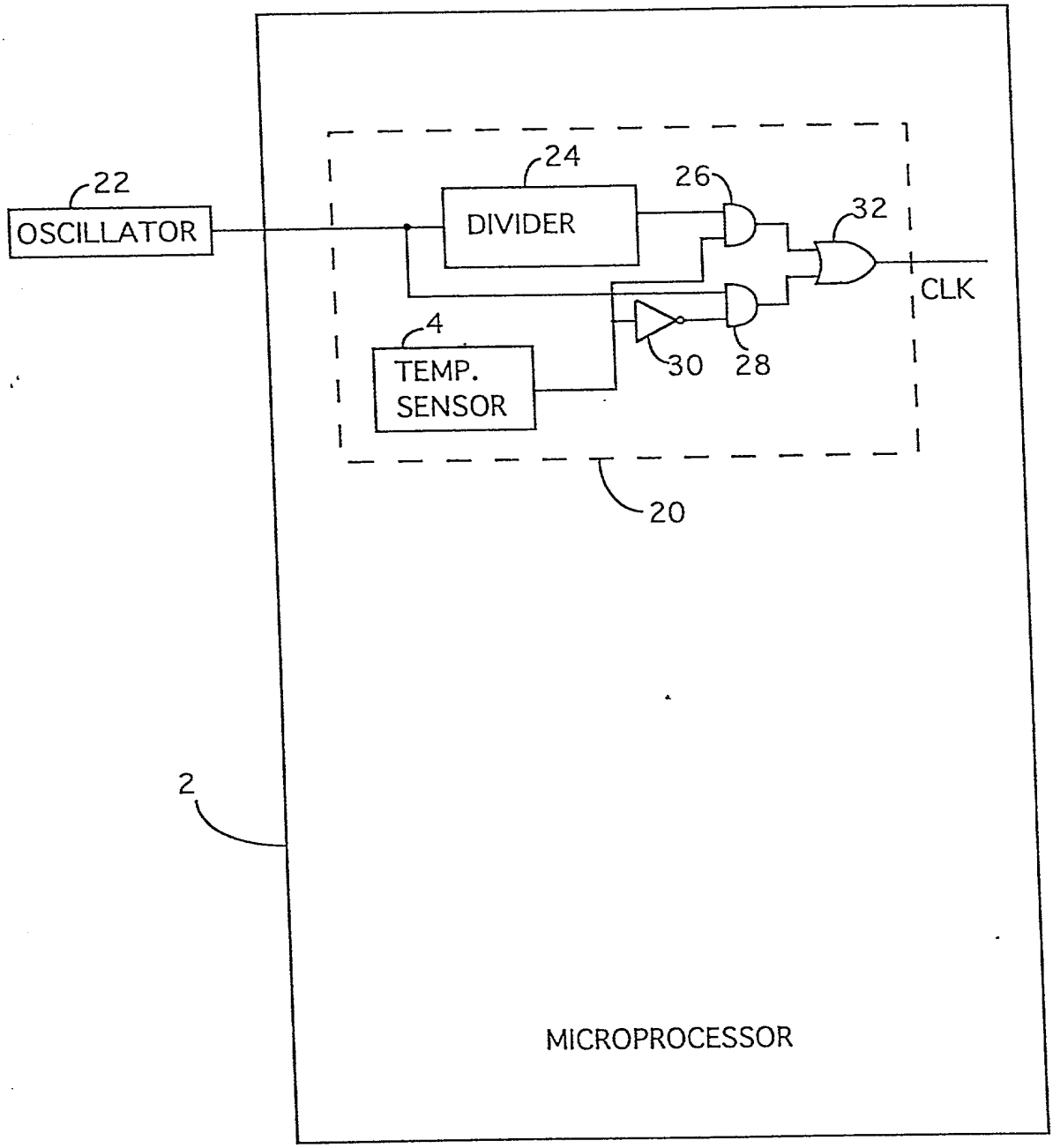
22
OSCILLATOR
24
DIVIDER
26
32
CLK
4
TEMP.
SENSOR
30
28
20
2
MICROPROCESSOR

FIG. 4

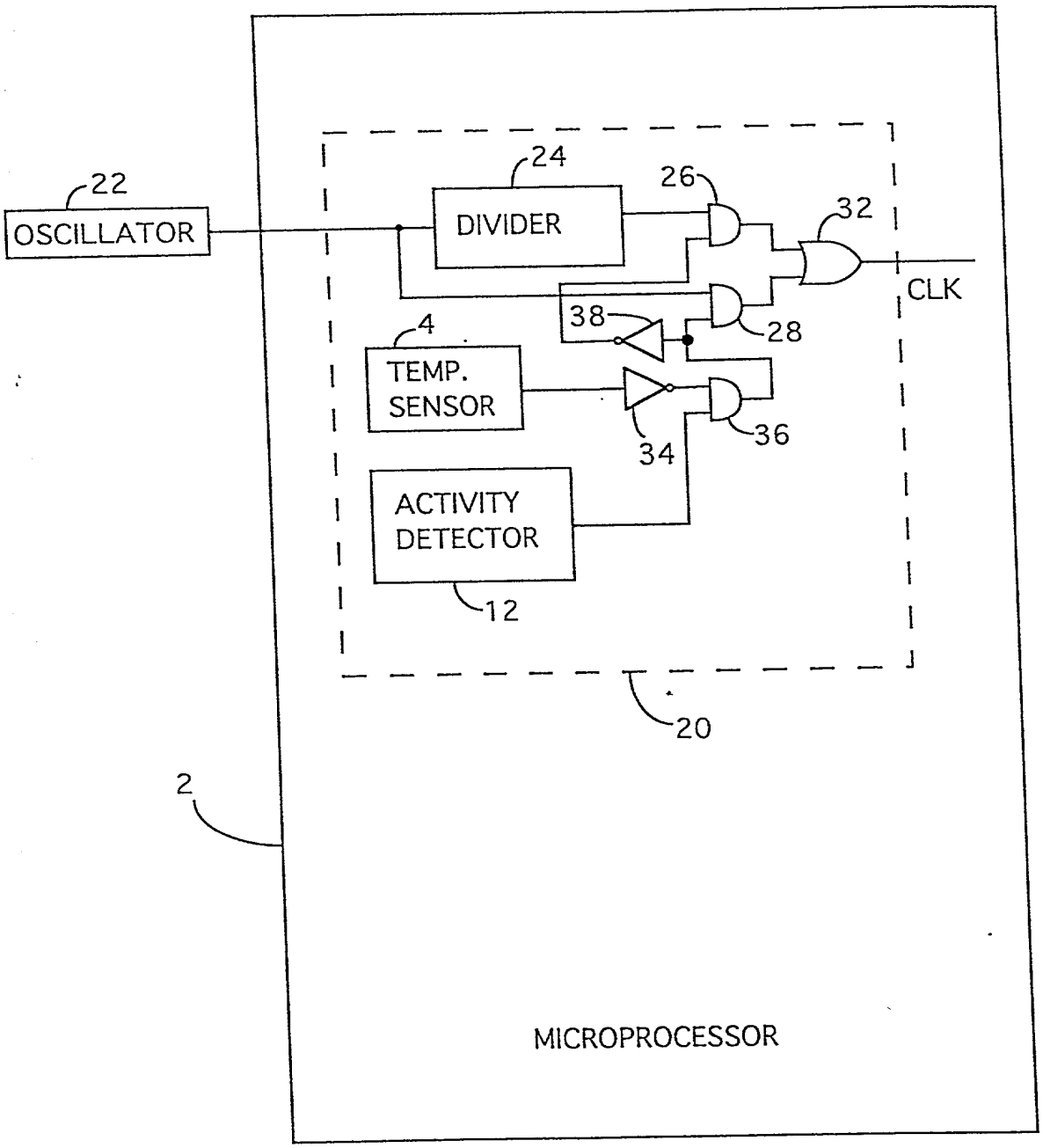
22
OSCILLATOR
24
DIVIDER
26
32
CLK
38
28
4
TEMP.
SENSOR
34
36
ACTIVITY
DETECTOR
12
20
2
MICROPROCESSOR

FIG. 5

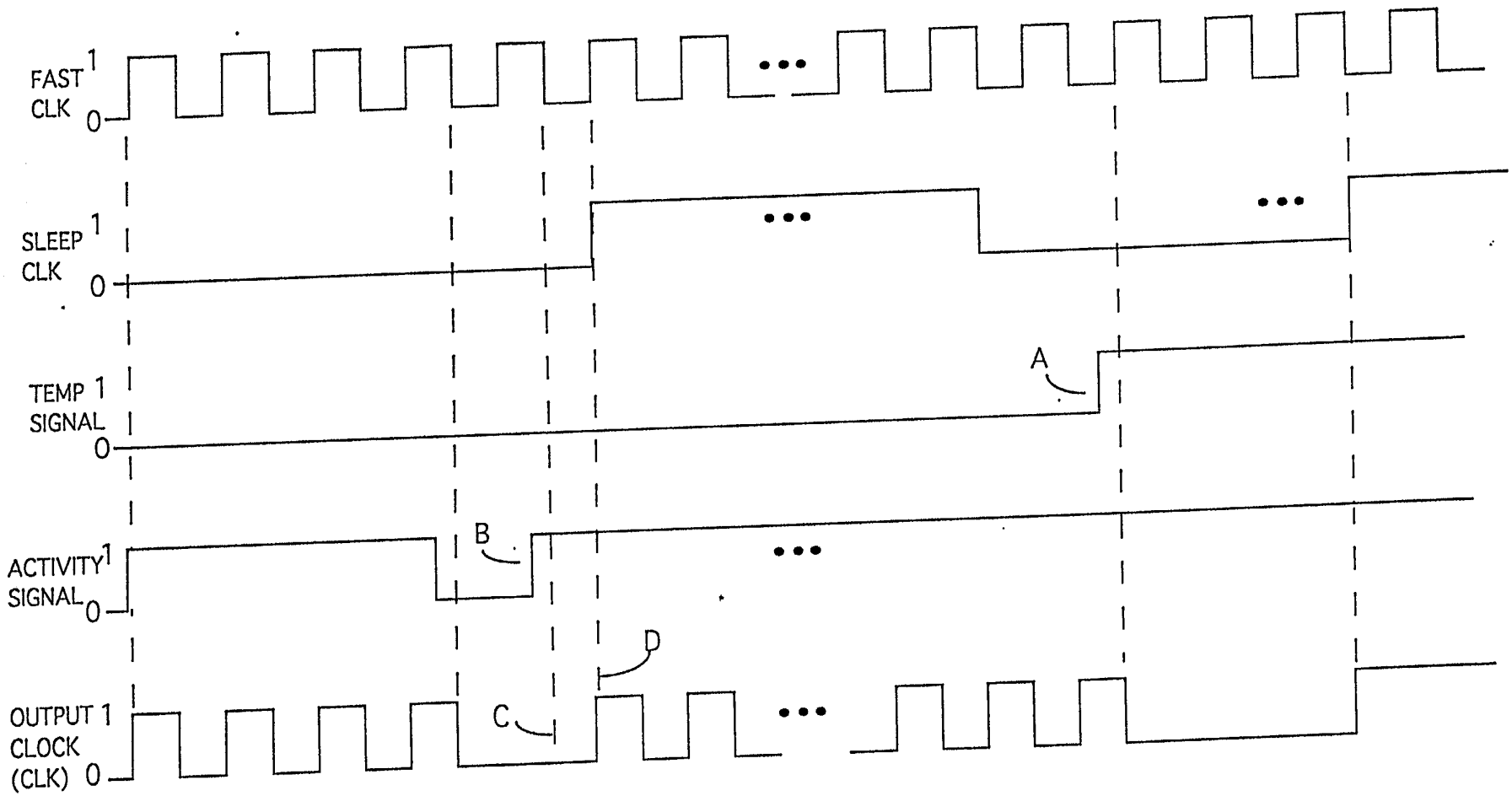
FAST CLK
1
0
SLEEP CLK
1
0
TEMP SIGNAL
1
0
A
ACTIVITY SIGNAL
1
0
B
D
OUTPUT CLOCK (CLK)
1
0
C

FIG. 6

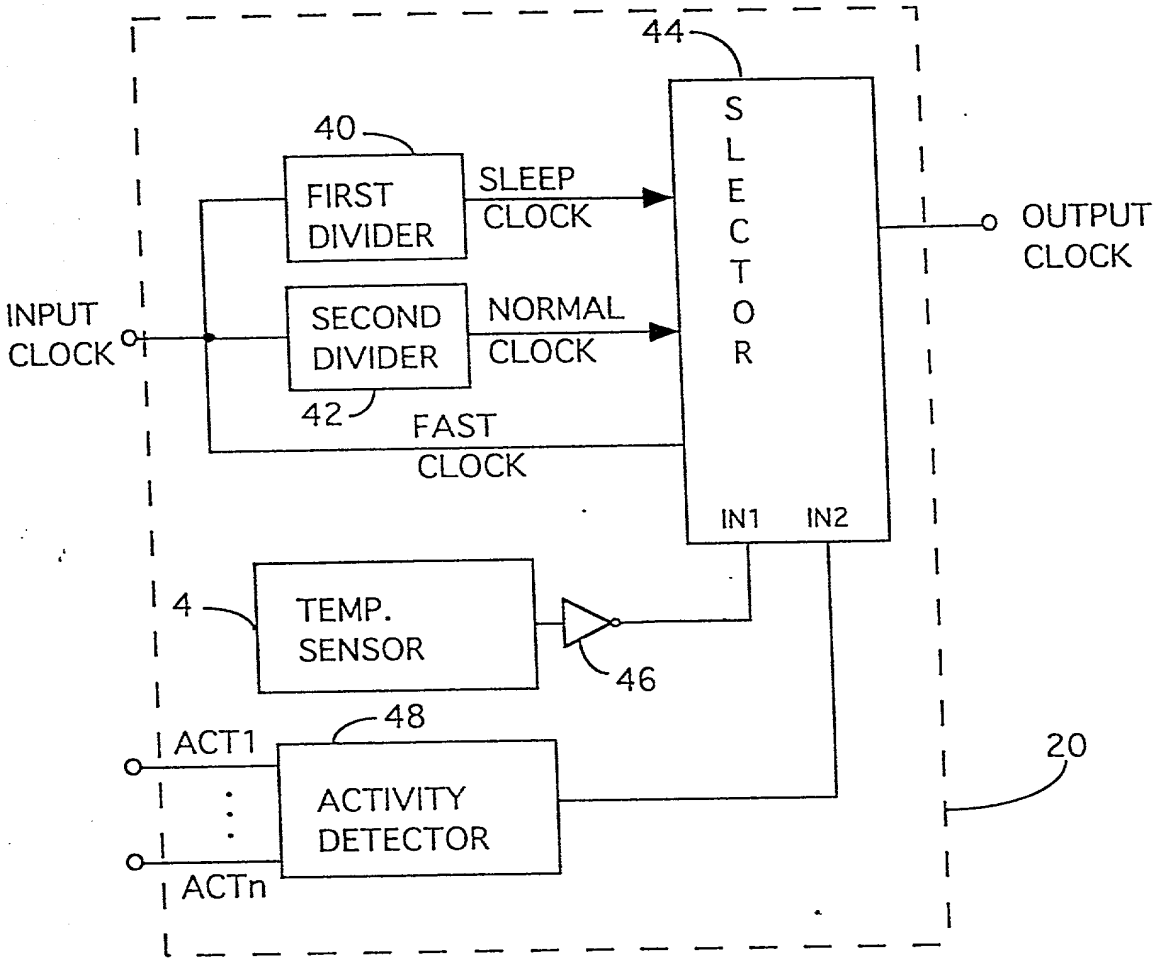
44
40
FIRST DIVIDER
SLEEP CLOCK
SELECTOR
OUTPUT CLOCK
INPUT CLOCK
SECOND DIVIDER
NORMAL CLOCK
42
FAST CLOCK
IN1
IN2
4
TEMP. SENSOR
46
48
ACT1
ACTIVITY DETECTOR
20
ACTn

FIG. 7

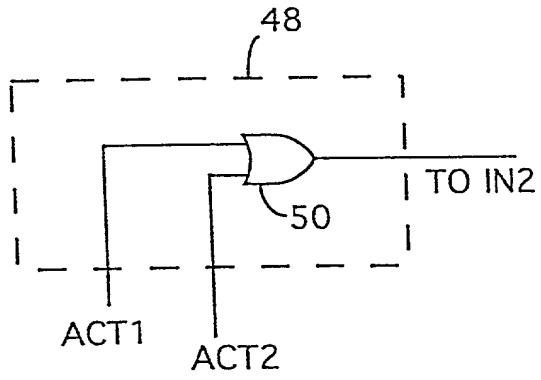
48
TO IN2
50
ACT1
ACT2

FIG. 8

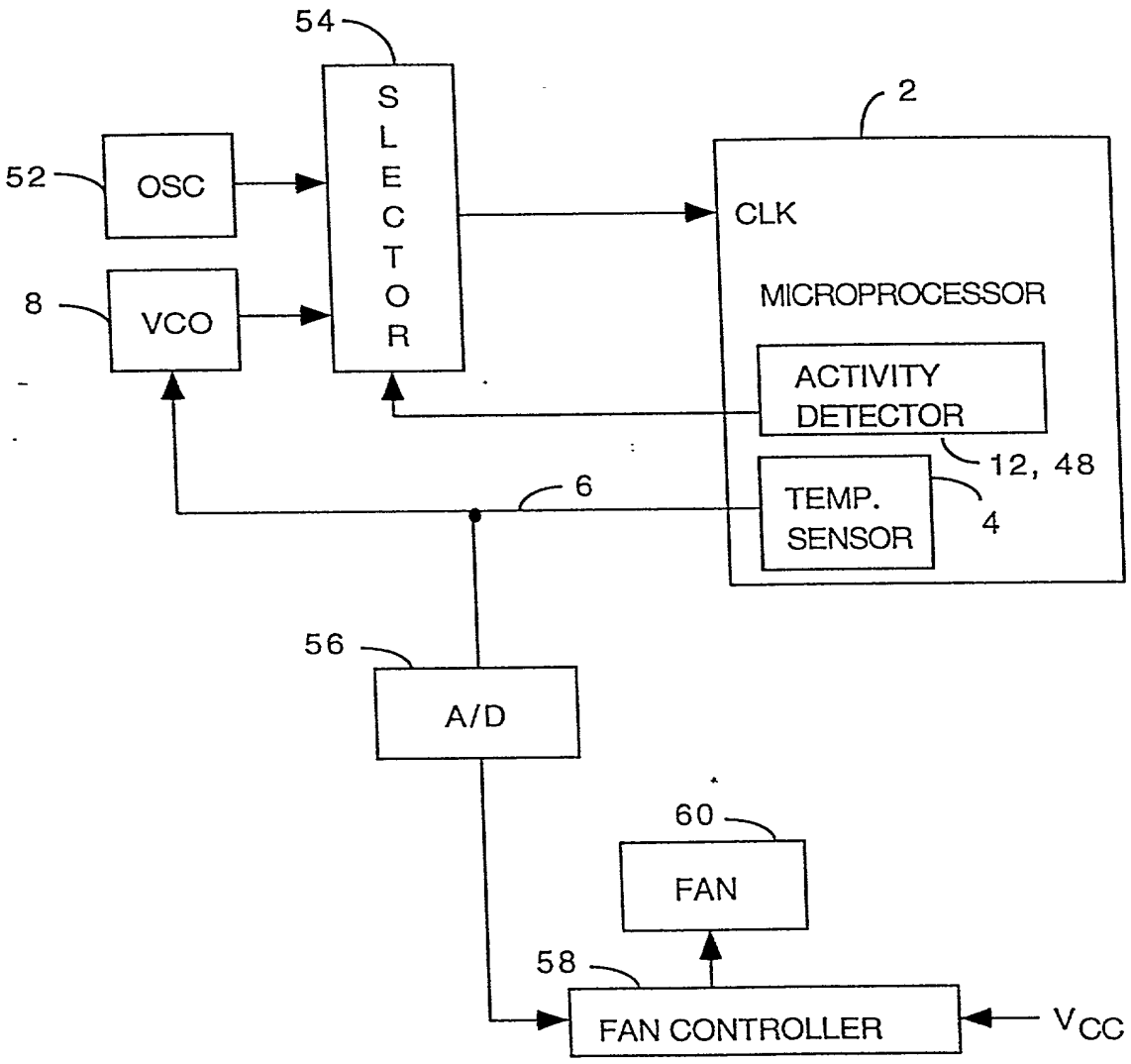
54
SELECTOR
2
52
OSC
CLK
MICROPROCESSOR
8
VCO
ACTIVITY DETECTOR
12, 48
6
TEMP. SENSOR
4
56
A/D
60
FAN
58
FAN CONTROLLER
V_{CC}

FIG. 9

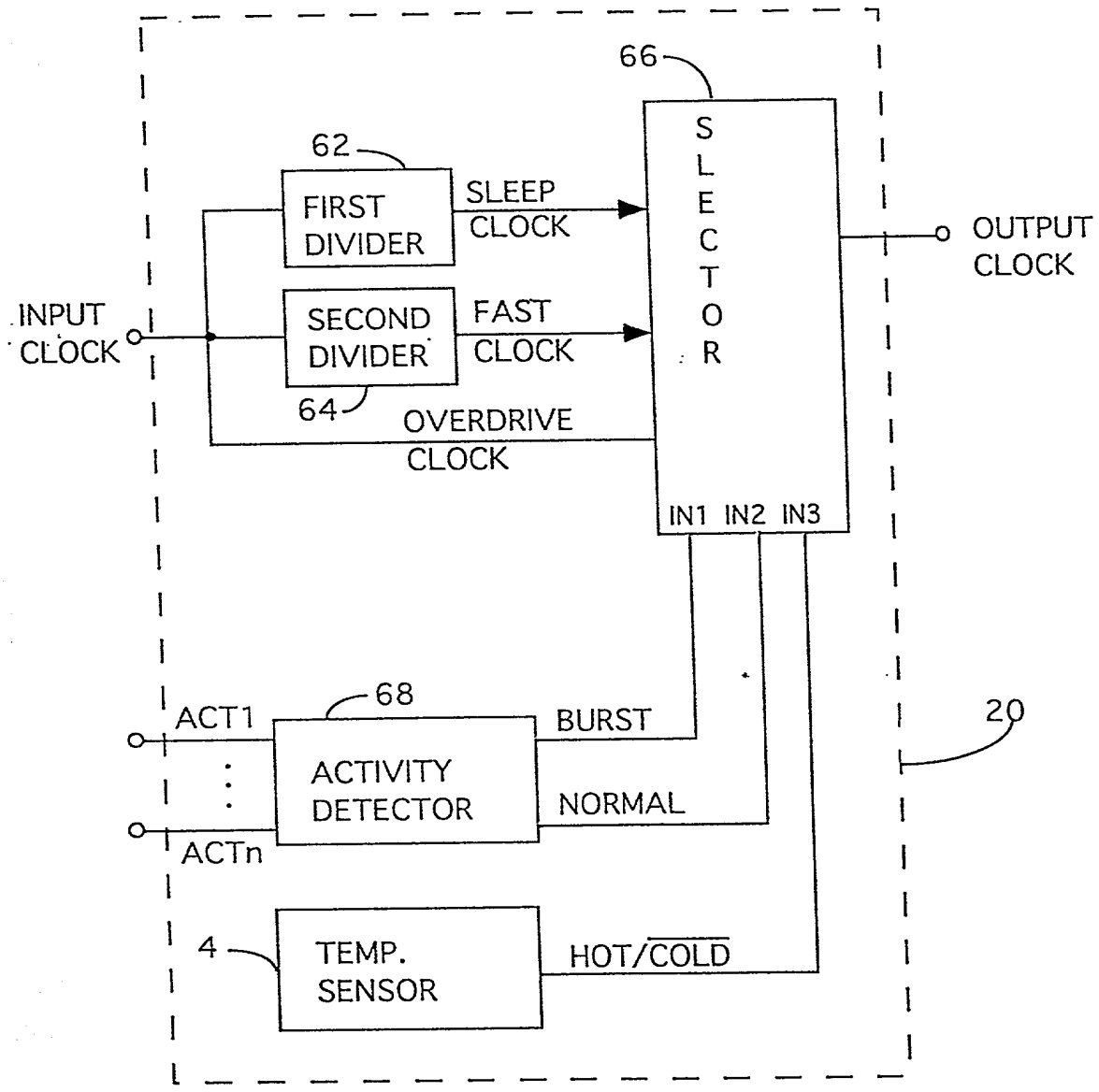
66
62
FIRST DIVIDER
SLEEP CLOCK
SELECTOR
OUTPUT CLOCK
INPUT CLOCK
SECOND DIVIDER
FAST CLOCK
64
OVERDRIVE CLOCK
IN1 IN2 IN3
ACT1
68
BURST
20
ACTIVITY DETECTOR
NORMAL
ACTn
4
TEMP. SENSOR
HOT/COLD

FIG. 10